

DEC 14 2006

Remarks

Applicants have amended Claims 1 and 9. Applicants submit no new matter has been added by the present amendment. Support for the amendment can be found generally throughout the text and examples, specifically at page 4, lines 16-20; page 5, lines 18-27; page 6, lines 12-30 and page 7, lines 1-5.

Claim Rejection under 35 U.S.C. § 102(b)

Claims 1 and 4-9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kresge et al. (U.S. Patent No. 5,665,183). Applicants respectfully traverse this ground of rejection.

Applicants submit to anticipate a claim, the cited references must teach each and every element of the claimed invention, either explicitly or inherently. Applicants submit the present invention is directed to a rubber compound comprising at least one solid halogenated butyl elastomer, at least one organically modified nanoclay, optionally at least one filler, optionally at least one curative, optionally at least one additional elastomer and optionally a stabilizer.

Applicants submit Kresge et al. does not teach each and every element of the claimed invention. Kresge et al. discloses a rubber complex for a tire inner liner that comprises a reactive rubber and a layered silicate clay. According to Kresge et al. the reactive rubber is a one which has a positively charged group. Kresge et al. does not teach or suggest a rubber composition which includes a halogenated butyl elastomer.

Because Kresge et al. fails to teach each and every element of the claimed invention, Applicants submit the present invention is novel in view of the cited document.

Claim Rejection under 35 U.S.C. § 102(e)

Claims 1 and 6-10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by WO 02/100935. Applicants respectfully traverse this ground of rejection.

PO-7949

-4-

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Applicants submit to anticipate a claim, the cited references must teach each and every element of the claimed invention, either explicitly or inherently. Applicants submit the present invention is directed to a rubber compound consisting essentially of at least one solid halogenated butyl elastomer, at least one organically modified nanoclay, at least one filler, optionally at least one curative, optionally at least one additional elastomer and optionally a stabilizer.

Applicants submit WO 02/100935 does not teach each and every element of the claimed invention. WO 02/100935 discloses a nanocomposite useful for air barriers which is a blend of an elastomer, vulcanized or unvulcanized, a nano-filler such as clay, and an exfoliating additive including long-chain tertiary amines and functionalized amines. According to WO 02/100935 the additive is capable of reaction with the halogen sites on the polymer to form complexes which help exfoliate the clay. Suitable additives include cationic surfactants, phosphonium or sulfonium derivatives of aliphatic, aromatic or arylaliphatic amines, phosphines and sulfides.

According to WO 02/100935 the clay is exfoliated by treatment with the additive. While WO 02/100935 discloses exfoliating a clay with an additive, the exfoliation results in intercalation of the clay and allows for the introduction of molecules between the layers of clay. As noted in the Examples it is only with the presence of the clay pretreated with an amine (i.e. the exfoliating additive) which improved the air permeability of the interpolymers. Applicants submit WO 02/100935 teaches exfoliated clay, not an organically modified clay according to the present invention.

WO 02/100935 does not disclose the elements of the present invention, including the claimed organically modified nanoclay. Accordingly, Applicants submit the present invention is novel in view of the cited document.

Respectfully submitted,

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